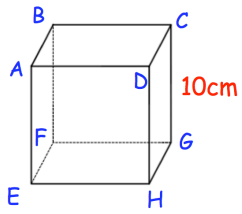
Name: _____ 5-a-day Further Maths

1st May

Corbettmaths

Shown below is a cube with side length 10cm



Work out the length of BH

P is the point (7, –5) on the circle $(x-5)^2+(y+3)^2=8$

Work out the equation of the tangent to the circle at P.

The nth term of a sequence is $n^2-8n+31$

By using completing the square, show that every term is positive.

Prove that

$$tan^2\theta-\frac{1}{cos^2\theta}\equiv -1$$

$$y=\frac{4x^7-x^5}{2x}$$

Work out $\frac{d^2y}{dx^2}$